NOAA, NATIONAL WEATHER SERVICE, WEATHER FORECAST OFFICE

Miami, Florida 33165

South Florida Dry Season Outlook 2013-2014

Drier Than Normal Conditions Expected

Near to Slightly Warmer Than Normal Temperatures Possible

October 18th, 2013: The recently-concluded rainy season was wetter than normal across most of South Florida. It was very wet over most of southwest Florida where rainfall totals for the period from May 18th to October 10th (the duration of this year's dry season) were in the 40 to 50 inch range, with a few spots exceeding 50 inches (Figure 1). This almost equals a year's worth of rain in less than five months! Isolated spots in southeast Florida also recorded over 50 inches of rain, with most of this area receiving between 35 and 45 inches. Every month of the rainy season featured above normal rainfall over different parts of south Florida, with July being the wettest month and August the driest (Figure 2).

Making the high summer rainfall amounts even more noteworthy is the lack of large-scale tropical systems affecting our area. The only tropical system to affect south Florida's weather this year was an indirect impact from Tropical Storm Andrea in early June. A moisture band extending from Andrea led to torrential downpours and flooding in northeast Miami-Dade and southeast Broward counties, as well as three tornadoes in Palm Beach and Broward counties.

Most of the rainfall this wet season was attributed to the interaction of the typical sea breezes with a predominantly moist and unstable southeast wind flow. This pattern favored the concentration of daily showers and thunderstorms over the

interior and western sections of south Florida, with more variable precipitation near the east coast.

Dry Season Climate Factors

A factor which often influences Florida weather in the dry season is the ENSO (El Niño/Southern Oscillation). ENSO is characterized by its warm phase, or El Niño, and its cold phase, or La Niña, with rather well-defined effects on Florida weather during the dry season. However, we are currently in the neutral phase of ENSO. This neutral phase leads to less impact on Florida weather. Instead, dry season weather patterns are largely influenced by other factors, most of which cannot be predicted more than two weeks in advance, such as the North American Oscillation (NAO).

One present factor that may act as an influence is the Pacific Decadal Oscillation (PDO), defined by water temperature trends in the northern Pacific Ocean. The current negative phase of the PDO is often associated with drier-than-normal winter and spring months across south Florida. Nevertheless, the overall confidence in the dry season outlook is rather low based on the absence of key factors such as ENSO.

Precipitation Outlook and Possible Impacts:

The precipitation outlook for this dry season calls for drier than normal conditions. This is largely based on the Climate Prediction Center (CPC) outlook (Figure 3) along with past indicators, or analogs, from past years with negative PDO patterns. This is a medium-confidence forecast. It should be noted that even in dry winter and spring seasons, frontal systems can stall over south Florida and lead to a few days of heavy rainfall and localized flooding.

Possible impacts of a dry winter and spring include a lower-than-normal threat of severe weather, as well as increased fire danger as copious rainy season moisture promotes grass and underbrush growth into the early part of the dry season. This grass and underbrush can then dry out and turn into fuel for wildfires if conditions dry out during the spring months

The average dry season rainfall over south Florida ranges from 12 to 15 inches over interior and western sections to 15 to 21 inches over eastern metro sections.

Temperature Outlook and Possible Impacts:

The south Florida temperature outlook for the dry season is for near to slightly-above normal temperatures. This is similar to the CPC outlook of equal chances of near, above, and below normal temperatures (Figure 4), except for a slight lean towards warmer-than-normal based on past negative PDO years and trends.

A key variable, or wild-card, is the presence of intra-season regional and global weather patterns that can dominate the regional weather during neutral ENSO seasons. Some examples of these variations, or oscillations, are the Pacific-North American Pattern (PNA) and the North Atlantic Oscillation. These oscillations are only predictable out to 2 weeks, therefore a reliable forecast of which phase will be present during certain times of the winter is very difficult if not virtually impossible.

The average winter temperatures over south Florida range from 64 to 66 degrees over interior and western areas to 67 to 69 degrees over eastern metro areas.

Freeze episodes occur on almost a yearly basis, especially over interior areas and around Lake Okeechobee. The severity of these freezes varies from relatively minor with little impacts, to severe ones such as in January and December of 2010 when millions of dollars in crop damage was noted. This winter's chances of seeing a moderate to severe freeze are about average. This means that areas around Lake Okeechobee into interior sections of southwest Florida can expect at least one light freeze, with the possibility of freezing temperatures significant lower as you get closer to the Atlantic and Gulf coast metro areas. Freezes in south Florida are most likely to occur in December and January, but can also occur well into February.

Stay tuned to local media outlets and NOAA Weather Radio for the latest weather information. For more information on the expected weather hazards and impacts in south Florida, as well as for updated local weather information and outlooks,

please visit the National Weather Service in Miami web site at weather.gov/southflorida. You can also visit our South Florida Climate Page.

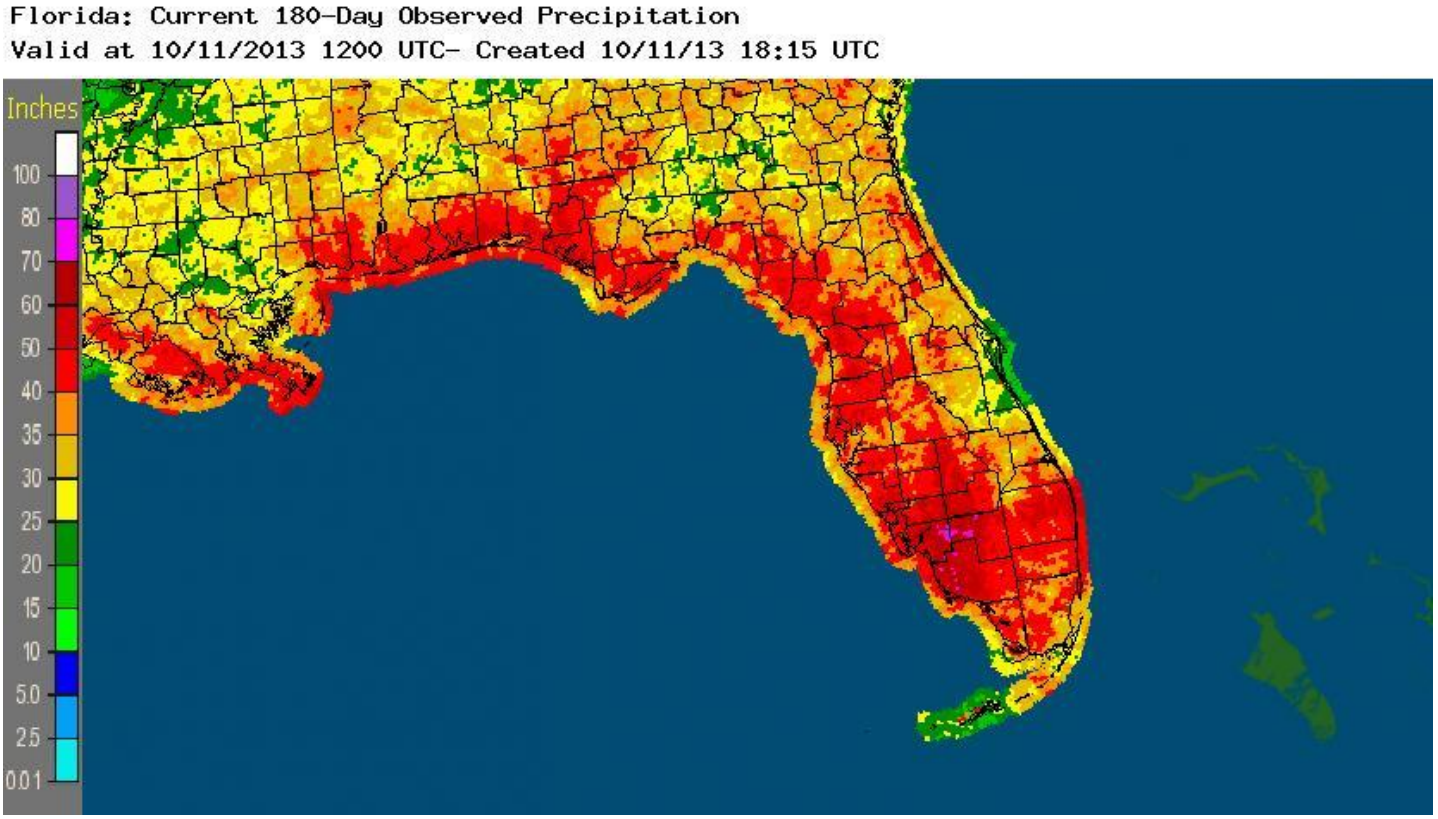

Figure 1: Precipitation in inches from mid-April to mid-October. Most areas received between 35 and 50 inches of rain during this period.

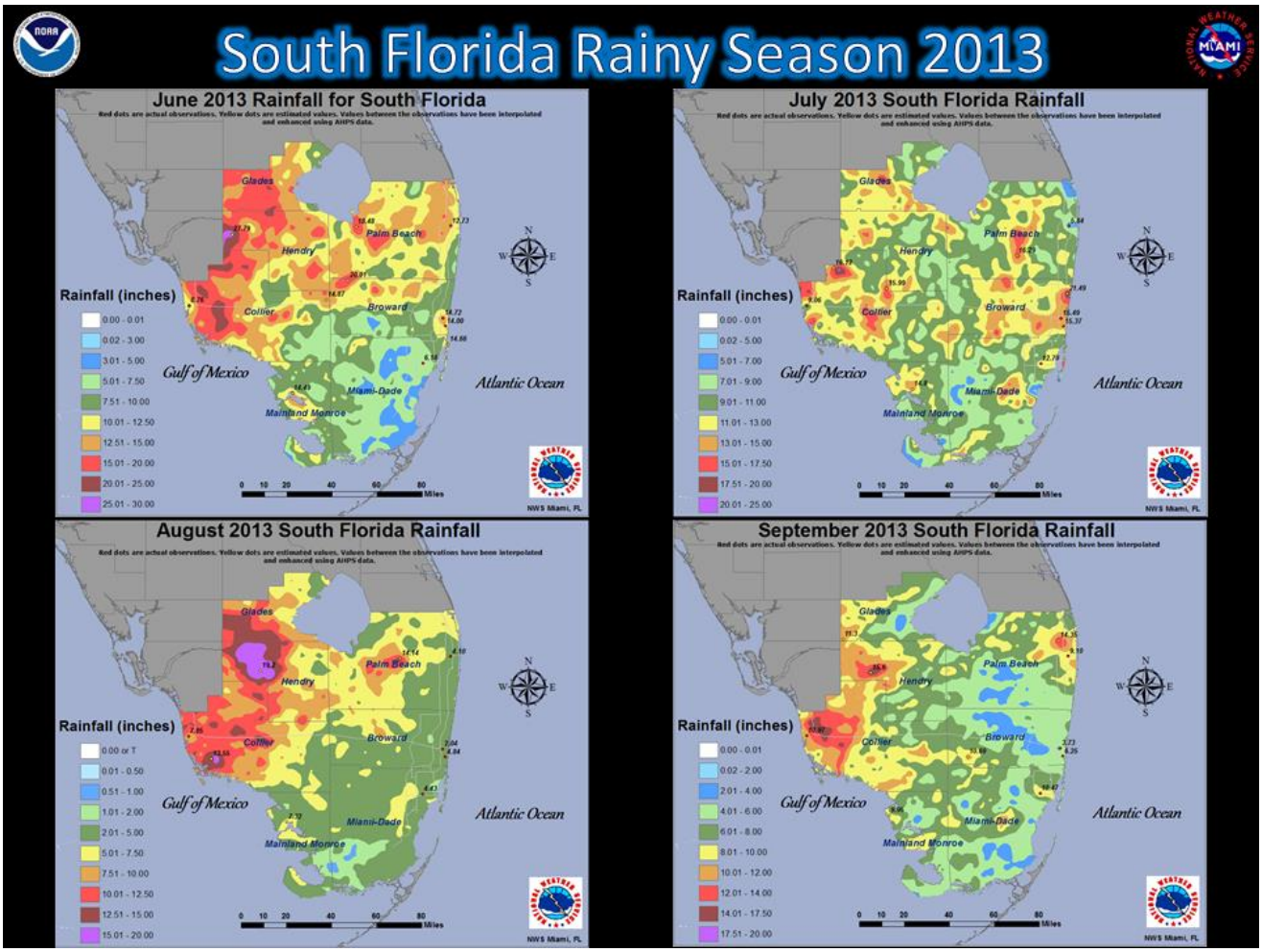

Figure 2: June – September Rainfall by Month

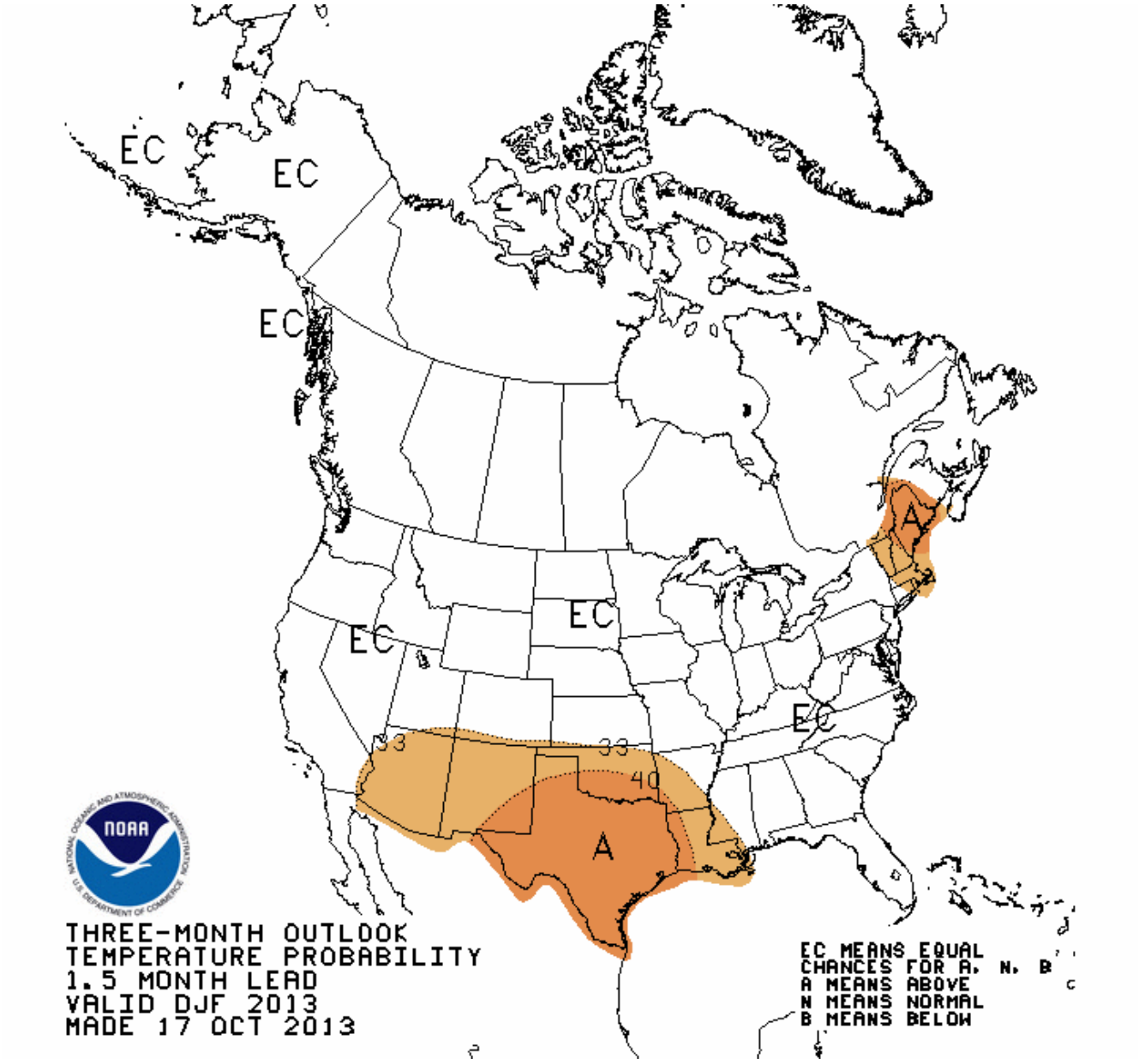

Figure 3: CPC Temperature Outlook for December - February.

EC (Equal Chances) represents a high level of uncertainty.

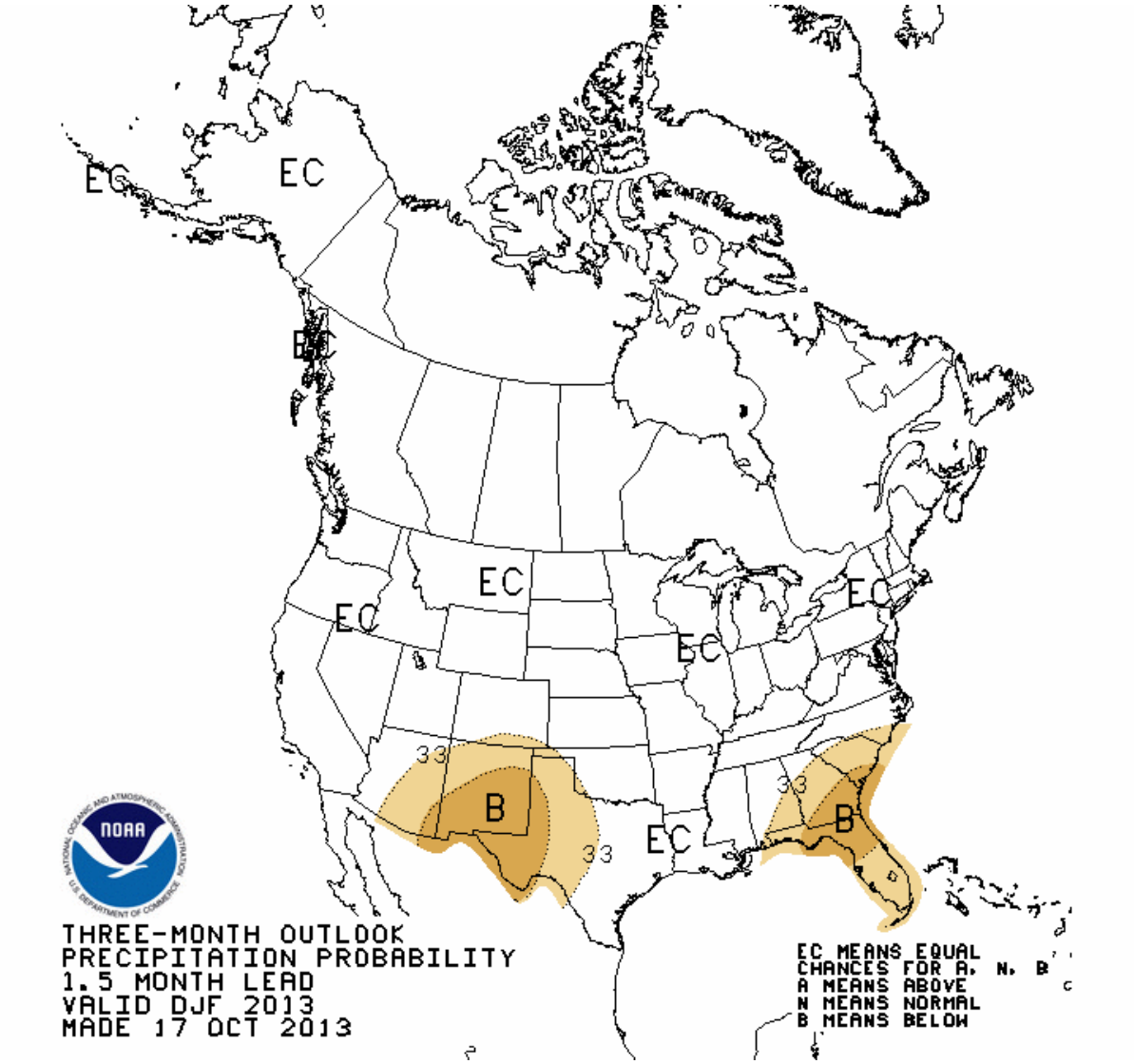

Figure 4: CPC Precipitation Outlook for December – February indicating a likelihood of below-normal precipitation